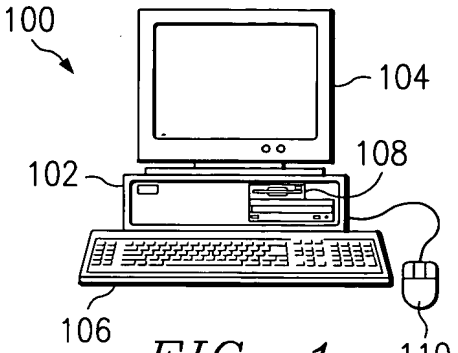


FIG. 1

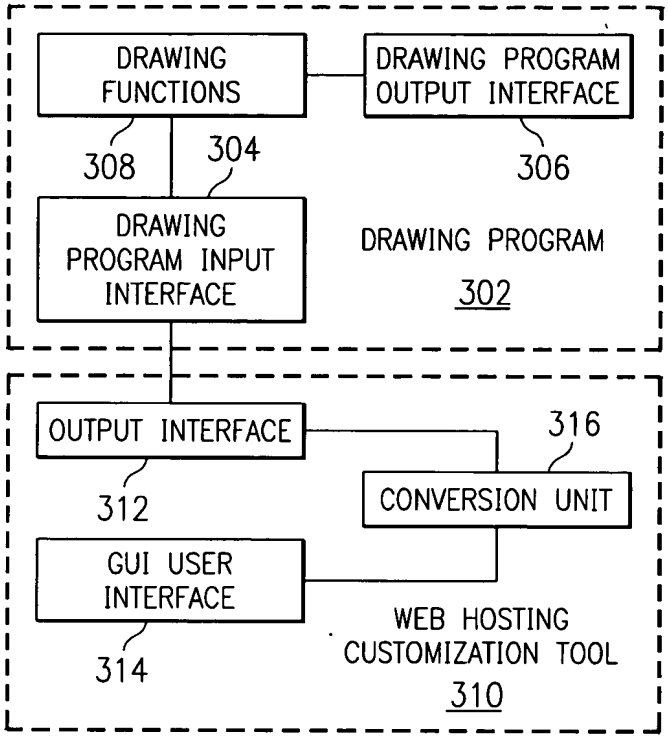


FIG. 3

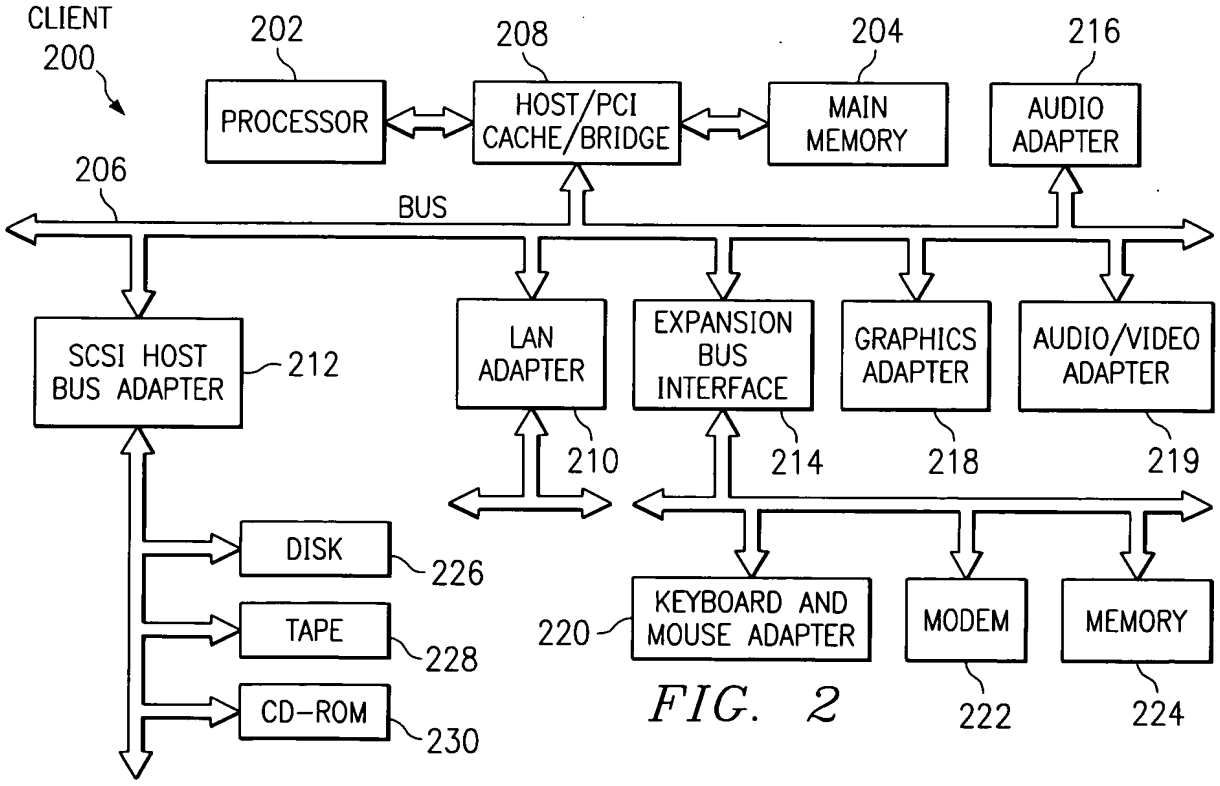


FIG. 2

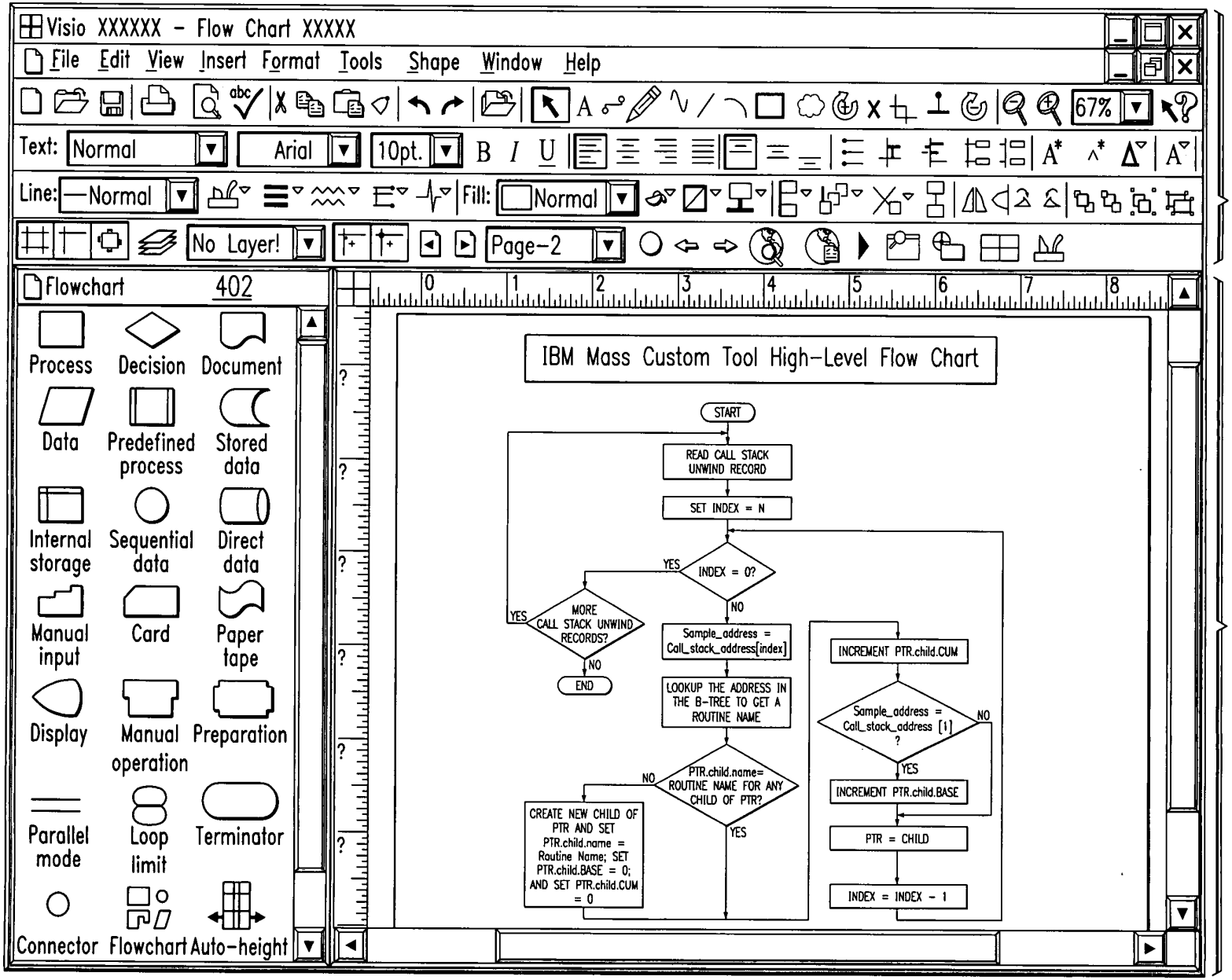
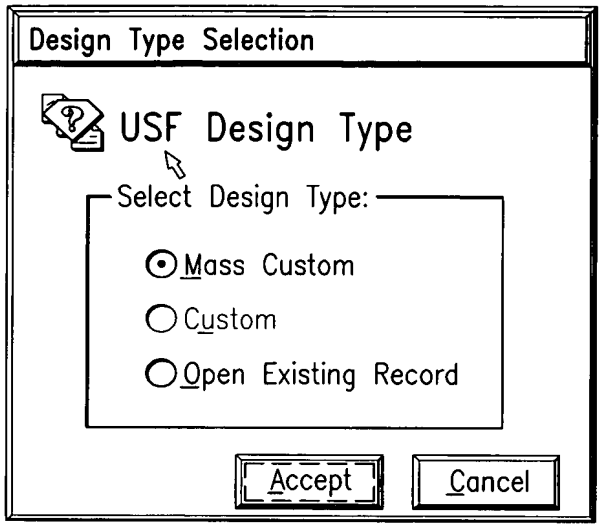

Visio XXXXXX - Flow Chart XXXXX
File Edit View Insert Format Tools Shape Window Help
Text: Normal
Arial
10pt.
Line: Normal
Fill: Normal
No Layer!
Page-2
67%
404
400
Flowchart 402
Process
Decision
Document
Data
Predefined process
Stored data
Internal storage
Sequential data
Direct data
Manual input
Card
Paper tape
Display
Manual operation
Preparation
Parallel mode
Loop limit
Terminator
Connector
Flowchart
Auto-height
406
IBM Mass Custom Tool High-Level Flow Chart
START
READ CALL STACK UNWIND RECORD
SET INDEX = N
INDEX = 0?
YES
NO
MORE CALL STACK UNWIND RECORDS?
YES
NO
END
Sample_address = Call_stack_address[index]
LOOKUP THE ADDRESS IN THE B-TREE TO GET A ROUTINE NAME
PTR.child.name= ROUTINE NAME FOR ANY CHILD OF PTR?
NO
YES
CREATE NEW CHILD OF PTR AND SET PTR.child.name = Routine Name; SET PTR.child.BASE = 0; AND SET PTR.child.CUM = 0
INCREMENT PTR.child.CUM
Sample_address = Call_stack_address [1] ?
NO
YES
INCREMENT PTR.child.BASE
PTR = CHILD
INDEX = INDEX - 1

FIG. 4

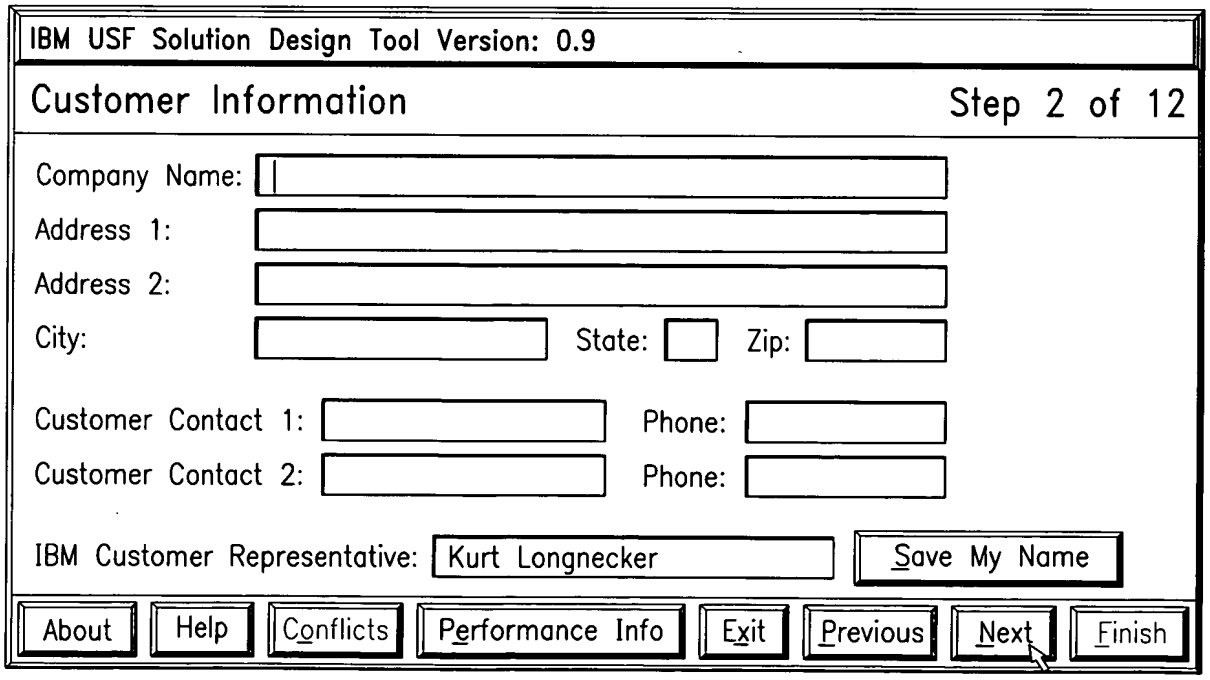
500

FIG. 5A



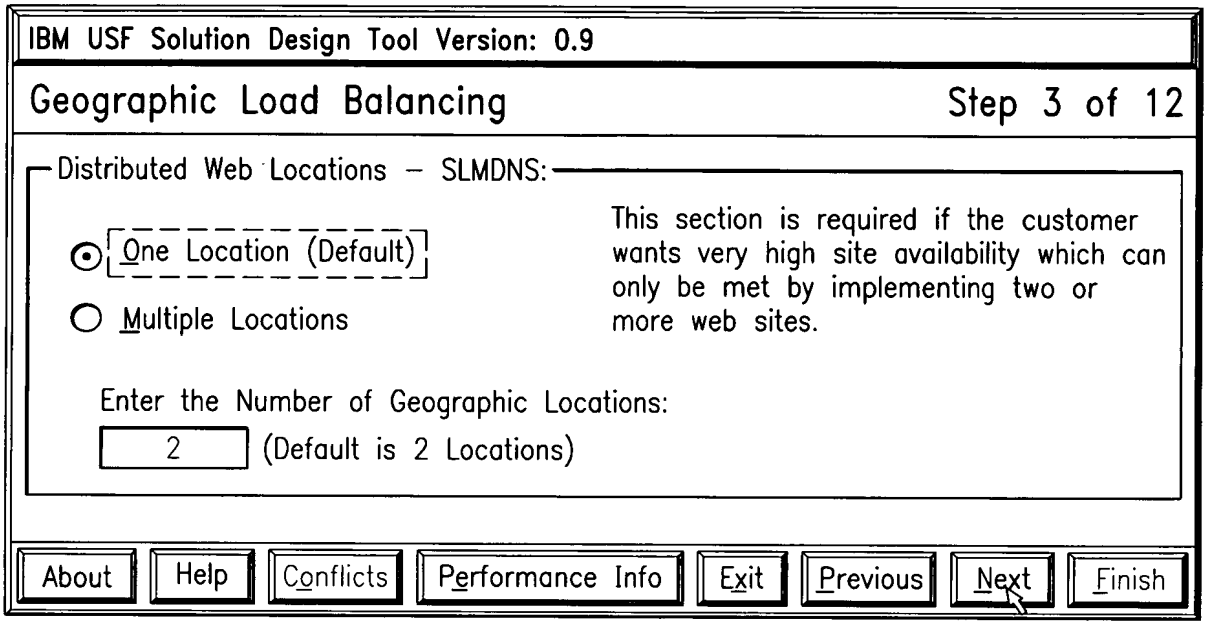
502

FIG. 5B



504

FIG. 5C



506

FIG. 5D

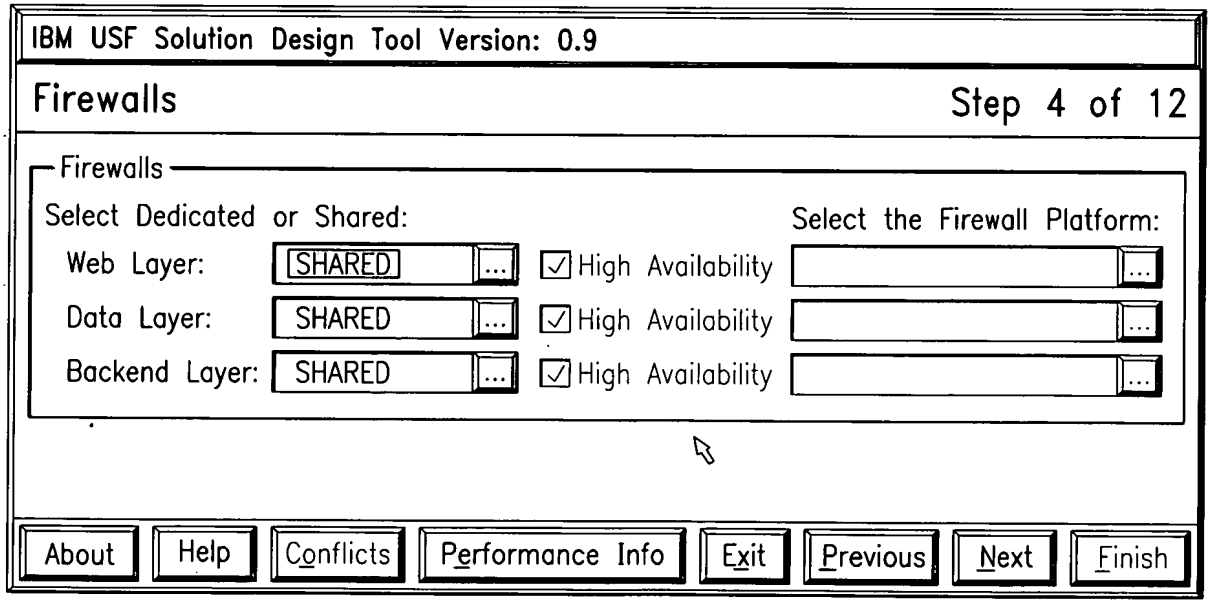


FIG. 5E

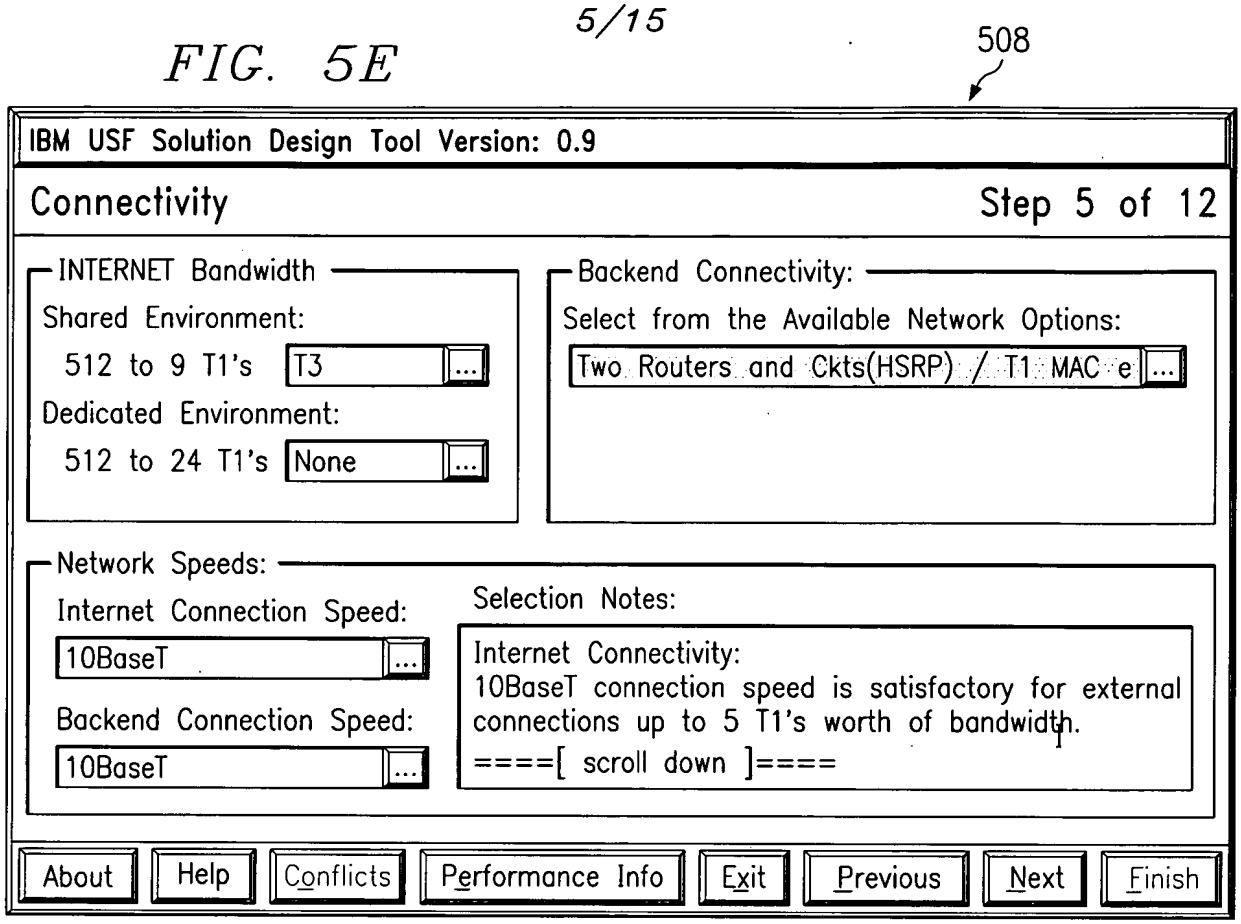

508
IBM USF Solution Design Tool Version: 0.9
Connectivity
Step 5 of 12
INTERNET Bandwidth
Shared Environment:
512 to 9 T1's
T3
Dedicated Environment:
512 to 24 T1's
None
Backend Connectivity:
Select from the Available Network Options:
Two Routers and Ckts(HSRP) / T1 MAC e
Network Speeds:
Internet Connection Speed:
10BaseT
Backend Connection Speed:
10BaseT
Selection Notes:
Internet Connectivity:
10BaseT connection speed is satisfactory for external connections up to 5 T1's worth of bandwidth.
====[scroll down]====
About
Help
Conflicts
Performance Info
Exit
Previous
Next
Finish

FIG. 5F

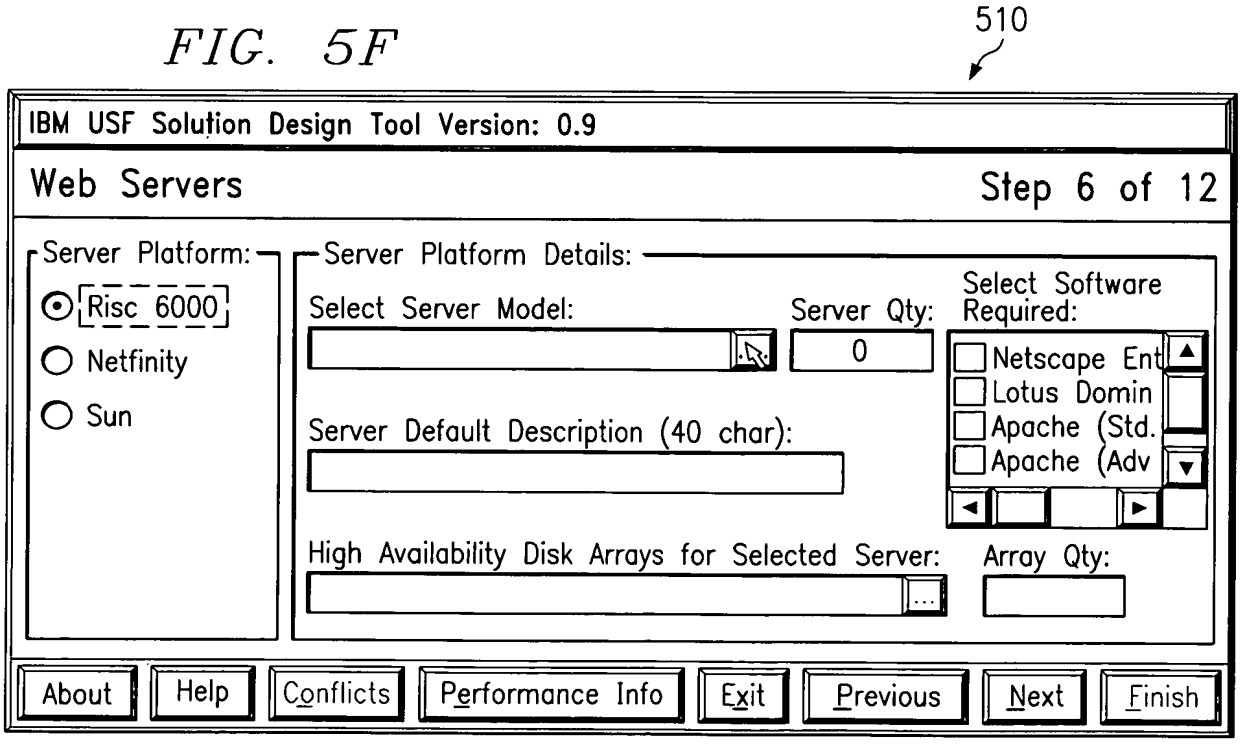

510
IBM USF Solution Design Tool Version: 0.9
Web Servers
Step 6 of 12
Server Platform:
Risc 6000
Netfinity
Sun
Server Platform Details:
Select Server Model:
Server Qty:
0
Select Software Required:
Netscape Ent
Lotus Domin
Apache (Std.
Apache (Adv
Server Default Description (40 char):
High Availability Disk Arrays for Selected Server:
Array Qty:
About
Help
Conflicts
Performance Info
Exit
Previous
Next
Finish

FIG. 5G

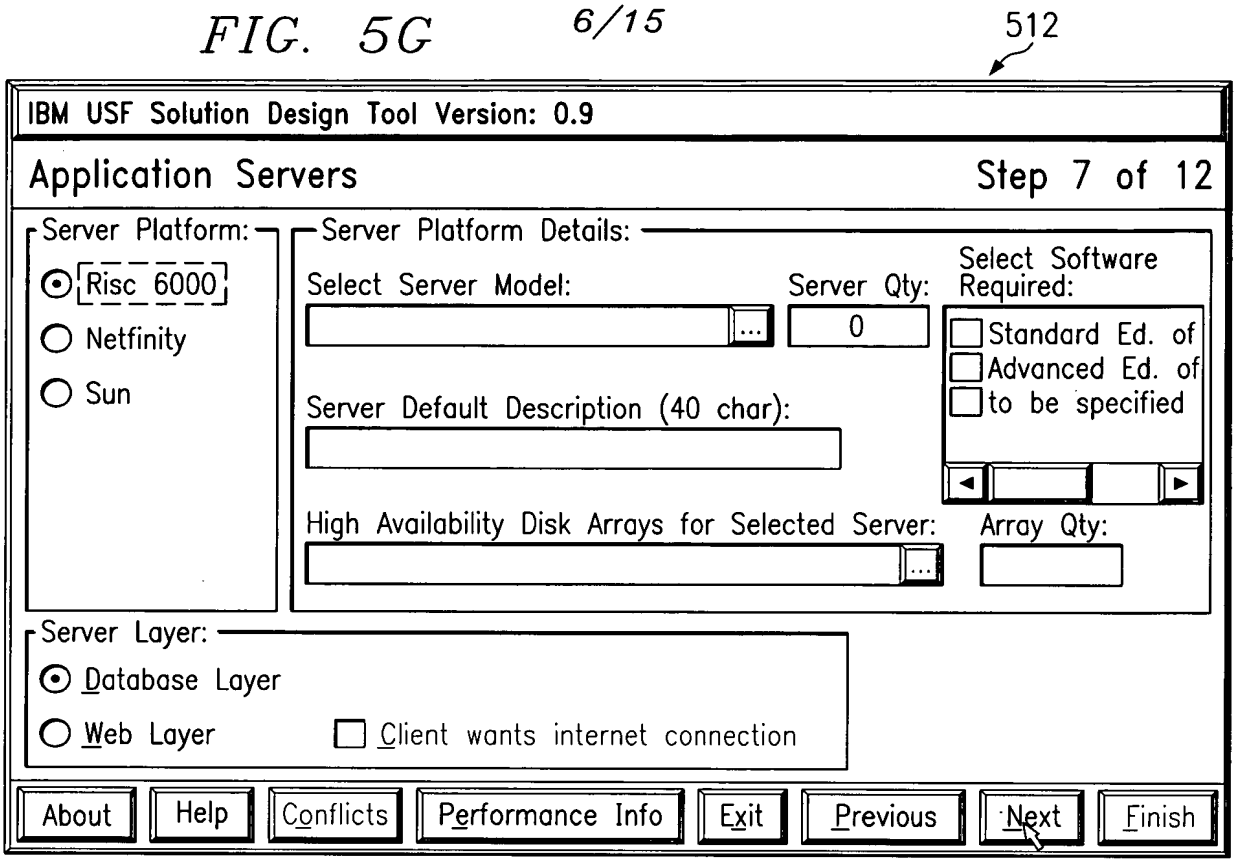

512
IBM USF Solution Design Tool Version: 0.9
Application Servers
Step 7 of 12
Server Platform:
Risc 6000
Netfinity
Sun
Server Platform Details:
Select Server Model:
Server Qty:
0
Select Software Required:
Standard Ed. of
Advanced Ed. of
to be specified
Server Default Description (40 char):
High Availability Disk Arrays for Selected Server:
Array Qty:
Server Layer:
Database Layer
Web Layer
Client wants internet connection
About
Help
Conflicts
Performance Info
Exit
Previous
Next
Finish

FIG. 5H

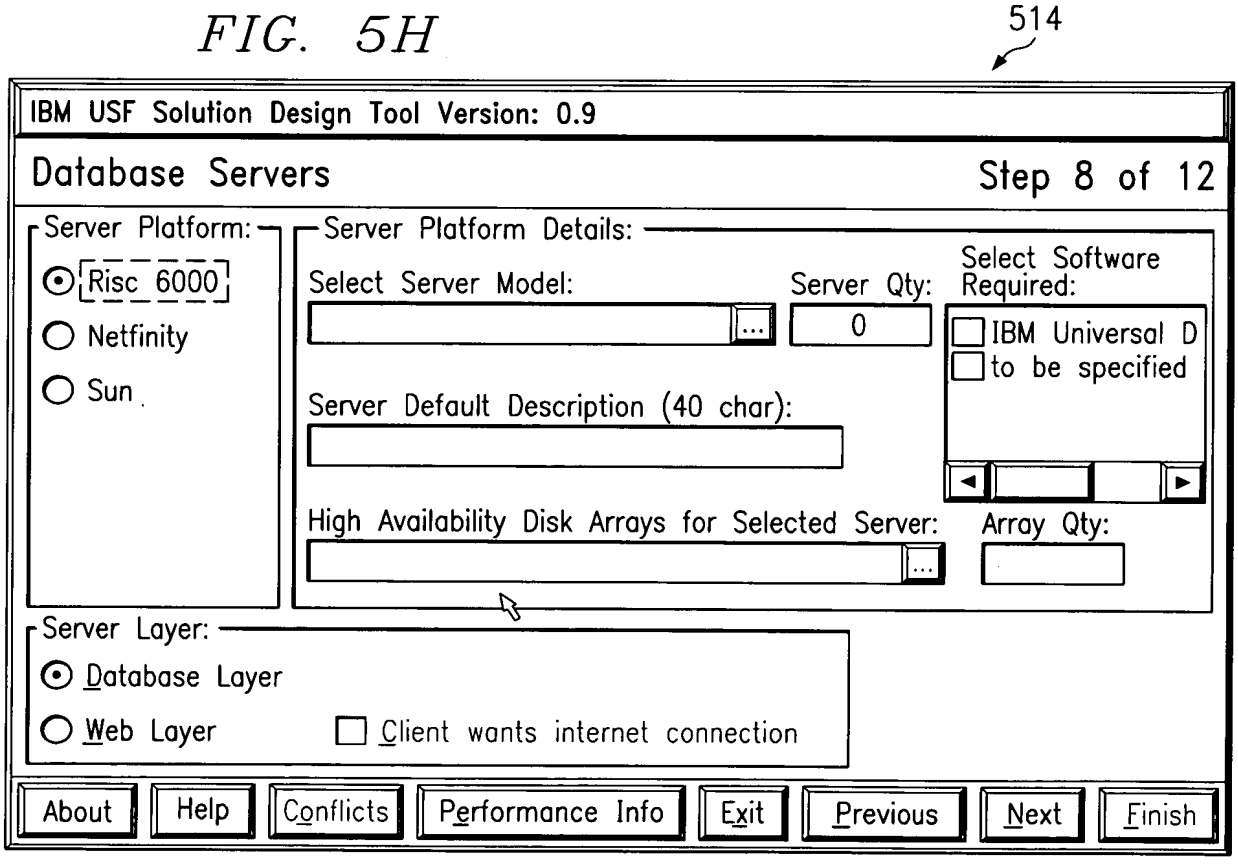

514
IBM USF Solution Design Tool Version: 0.9
Database Servers
Step 8 of 12
Server Platform:
Risc 6000
Netfinity
Sun
Server Platform Details:
Select Server Model:
Server Qty:
0
Select Software Required:
IBM Universal D
to be specified
Server Default Description (40 char):
High Availability Disk Arrays for Selected Server:
Array Qty:
Server Layer:
Database Layer
Web Layer
Client wants internet connection
About
Help
Conflicts
Performance Info
Exit
Previous
Next
Finish

FIG. 5I

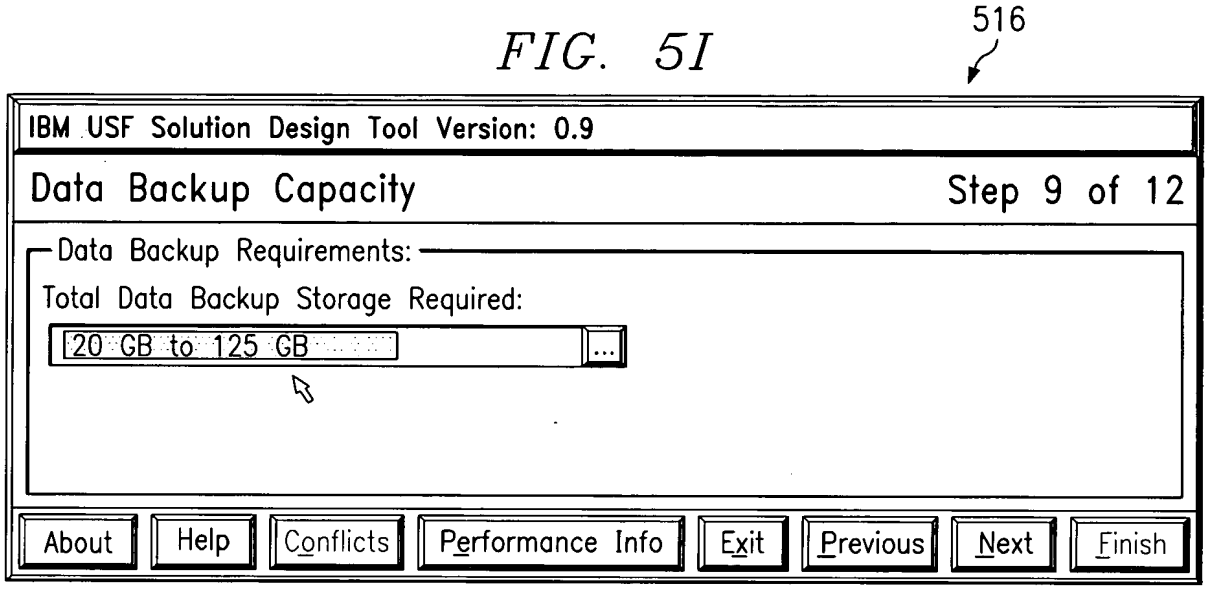

516
IBM USF Solution Design Tool Version: 0.9
Data Backup Capacity
Step 9 of 12
Data Backup Requirements:
Total Data Backup Storage Required:
20 GB to 125 GB
...
About
Help
Conflicts
Performance Info
Exit
Previous
Next
Finish

FIG. 5J

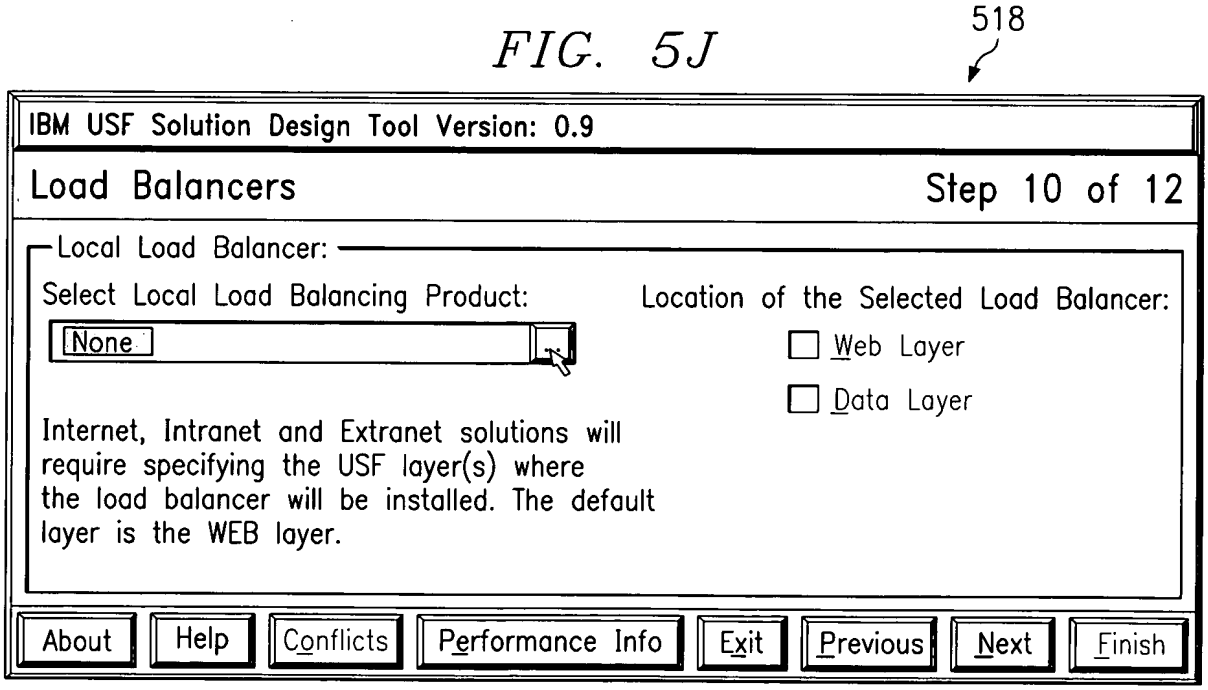

518
IBM USF Solution Design Tool Version: 0.9
Load Balancers
Step 10 of 12
Local Load Balancer:
Select Local Load Balancing Product:
None
Location of the Selected Load Balancer:
Web Layer
Data Layer
Internet, Intranet and Extranet solutions will require specifying the USF layer(s) where the load balancer will be installed. The default layer is the WEB layer.
About
Help
Conflicts
Performance Info
Exit
Previous
Next
Finish

FIG. 5K

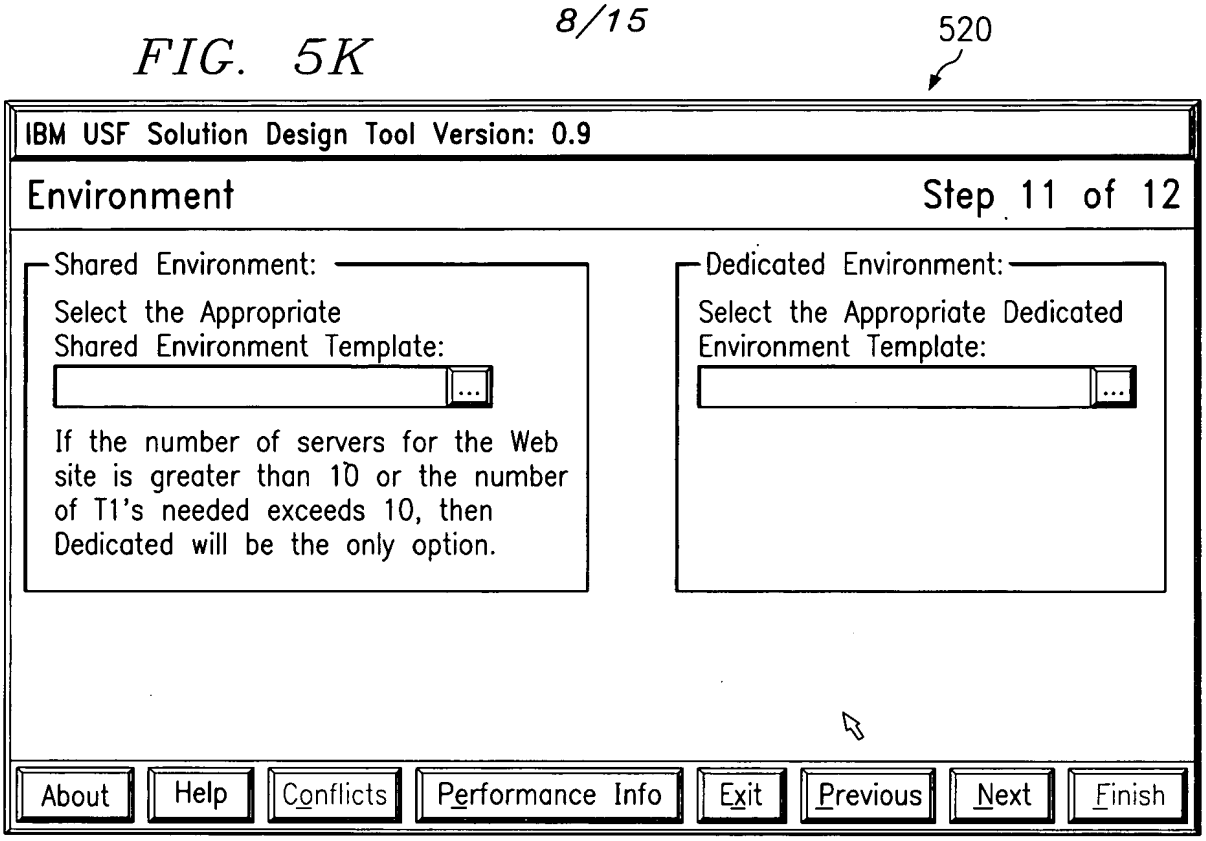

520
IBM USF Solution Design Tool Version: 0.9
Environment
Step 11 of 12
Shared Environment:
Select the Appropriate Shared Environment Template:
...
If the number of servers for the Web site is greater than 10 or the number of T1's needed exceeds 10, then Dedicated will be the only option.
Dedicated Environment:
Select the Appropriate Dedicated Environment Template:
...
About
Help
Conflicts
Performance Info
Exit
Previous
Next
Finish

FIG. 5L

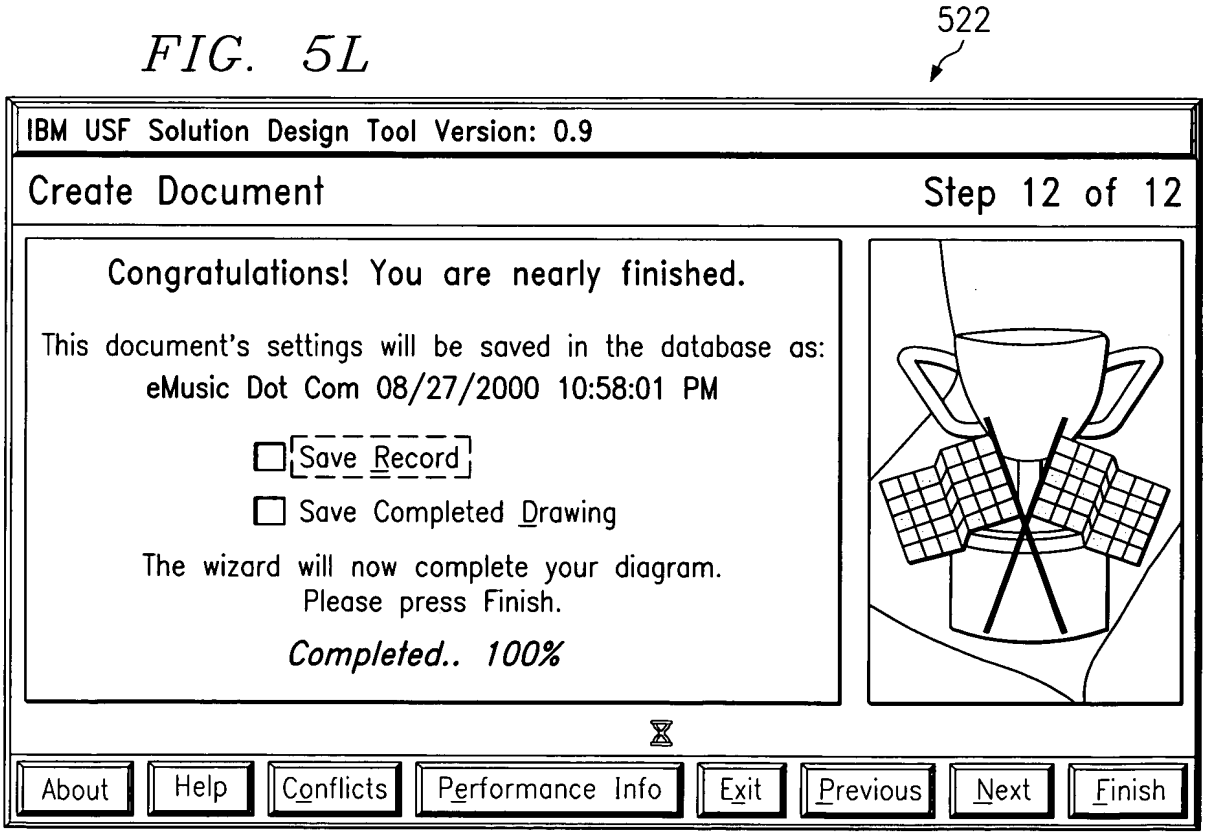

522
IBM USF Solution Design Tool Version: 0.9
Create Document
Step 12 of 12
Congratulations! You are nearly finished.
This document's settings will be saved in the database as:
eMusic Dot Com 08/27/2000 10:58:01 PM
Save Record
Save Completed Drawing
The wizard will now complete your diagram.
Please press Finish.
Completed.. 100%
About
Help
Conflicts
Performance Info
Exit
Previous
Next
Finish

FIG. 5M

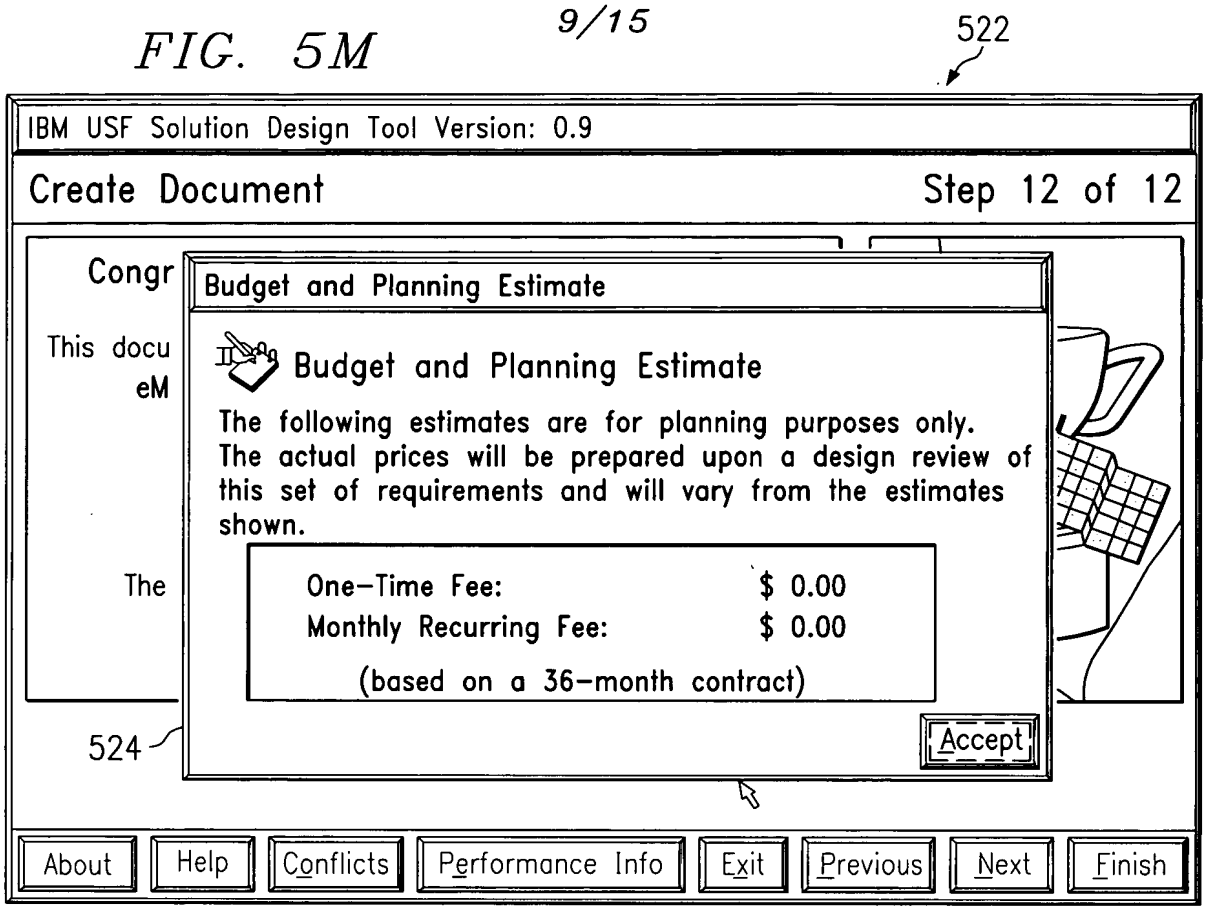
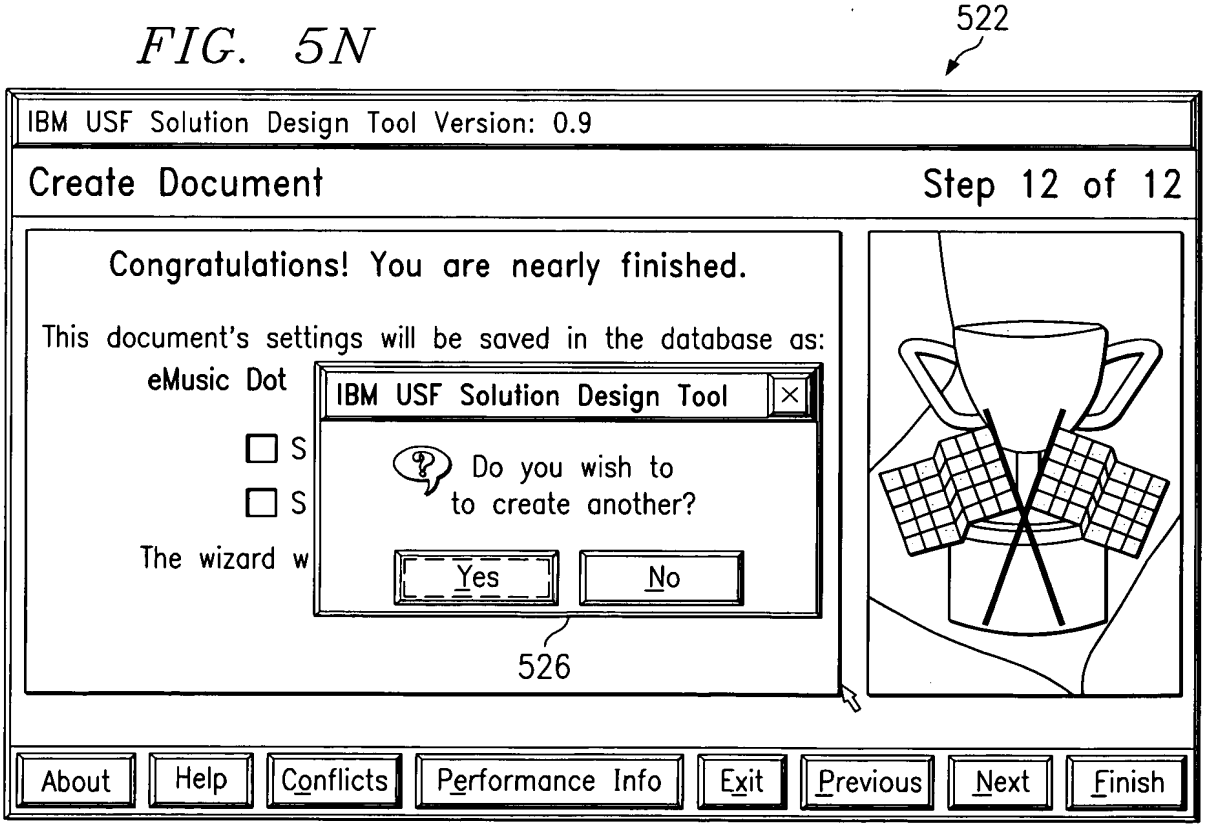

522
IBM USF Solution Design Tool Version: 0.9
Create Document
Step 12 of 12
Congr
This docu
eM
The
Budget and Planning Estimate
Budget and Planning Estimate
The following estimates are for planning purposes only. The actual prices will be prepared upon a design review of this set of requirements and will vary from the estimates shown.
One-Time Fee: $ 0.00
Monthly Recurring Fee: $ 0.00
(based on a 36-month contract)
524
Accept
About
Help
Conflicts
Performance Info
Exit
Previous
Next
Finish

FIG. 5N


522
IBM USF Solution Design Tool Version: 0.9
Create Document
Step 12 of 12
Congratulations! You are nearly finished.
This document's settings will be saved in the database as:
eMusic Dot
S
S
The wizard w
IBM USF Solution Design Tool
Do you wish to to create another?
Yes
No
526
About
Help
Conflicts
Performance Info
Exit
Previous
Next
Finish

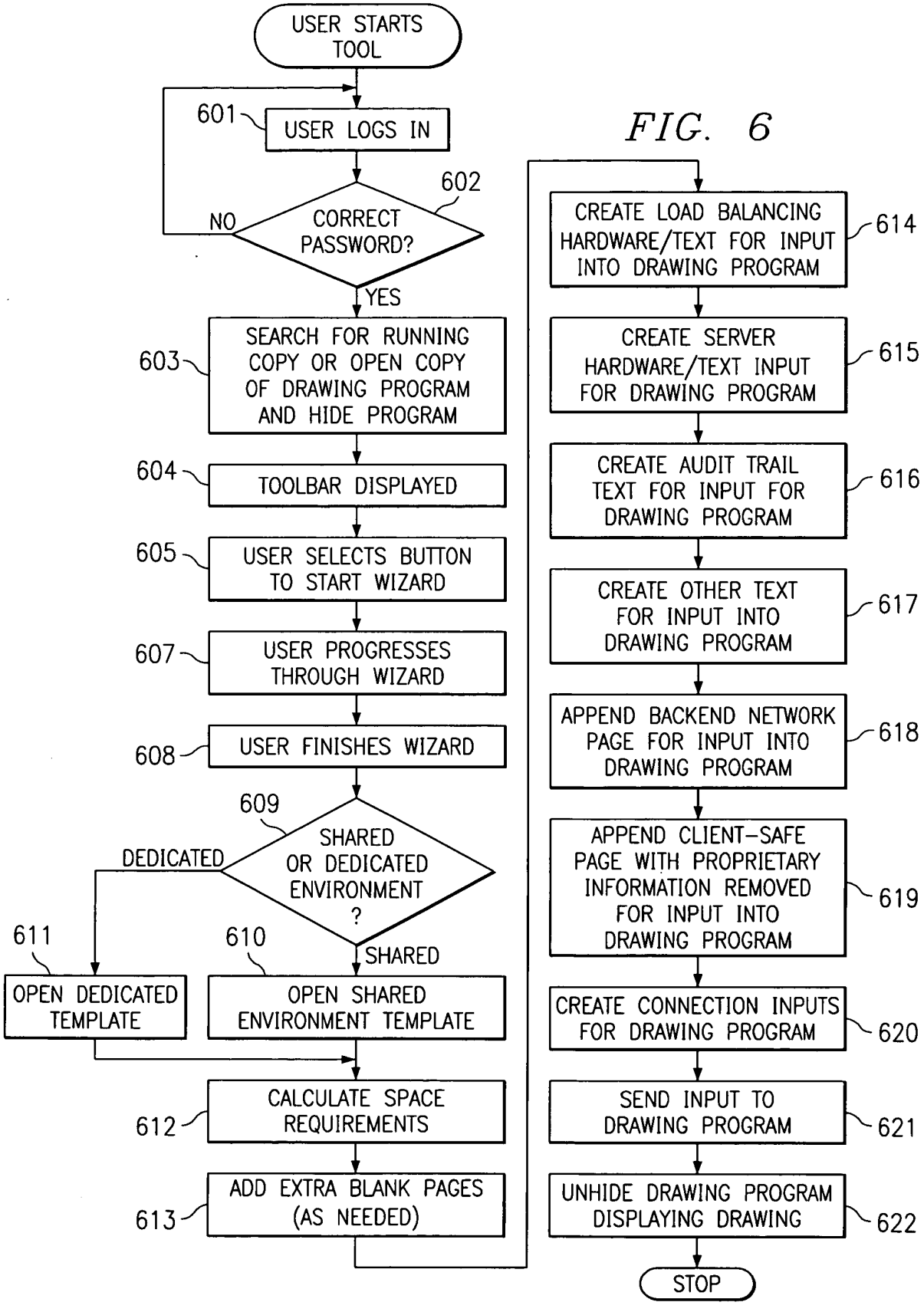
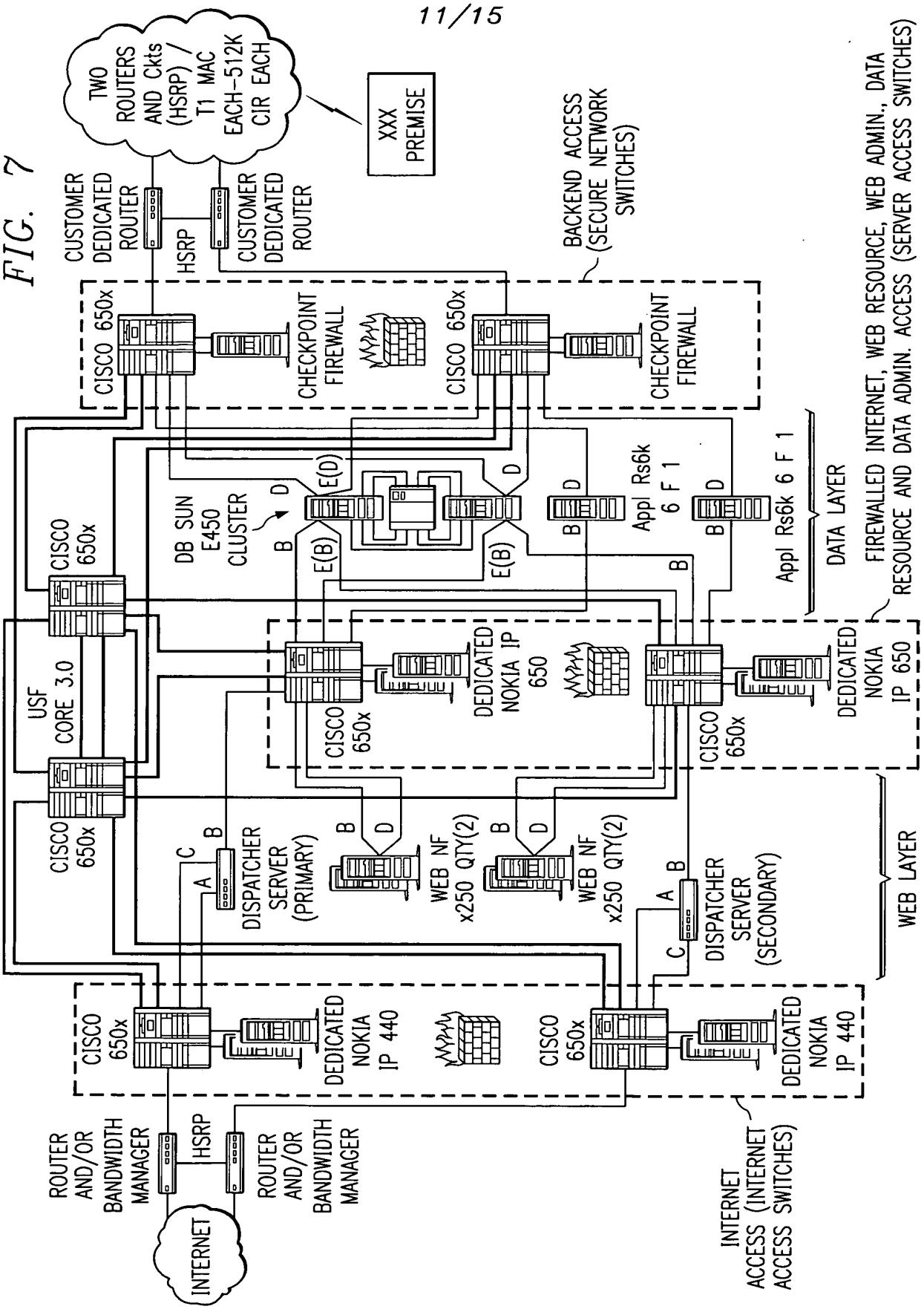

USER STARTS TOOL
601
USER LOGS IN
602
CORRECT PASSWORD?
NO
YES
603
SEARCH FOR RUNNING COPY OR OPEN COPY OF DRAWING PROGRAM AND HIDE PROGRAM
604
TOOLBAR DISPLAYED
605
USER SELECTS BUTTON TO START WIZARD
607
USER PROGRESSES THROUGH WIZARD
608
USER FINISHES WIZARD
609
SHARED OR DEDICATED ENVIRONMENT ?
DEDICATED
SHARED
611
OPEN DEDICATED TEMPLATE
610
OPEN SHARED ENVIRONMENT TEMPLATE
612
CALCULATE SPACE REQUIREMENTS
613
ADD EXTRA BLANK PAGES (AS NEEDED)
614
CREATE LOAD BALANCING HARDWARE/TEXT FOR INPUT INTO DRAWING PROGRAM
615
CREATE SERVER HARDWARE/TEXT INPUT FOR DRAWING PROGRAM
616
CREATE AUDIT TRAIL TEXT FOR INPUT FOR DRAWING PROGRAM
617
CREATE OTHER TEXT FOR INPUT INTO DRAWING PROGRAM
618
APPEND BACKEND NETWORK PAGE FOR INPUT INTO DRAWING PROGRAM
619
APPEND CLIENT-SAFE PAGE WITH PROPRIETARY INFORMATION REMOVED FOR INPUT INTO DRAWING PROGRAM
620
CREATE CONNECTION INPUTS FOR DRAWING PROGRAM
621
SEND INPUT TO DRAWING PROGRAM
622
UNHIDE DRAWING PROGRAM DISPLAYING DRAWING
STOP

FIG. 6

FIG. 7


TWO ROUTERS AND Ckts (HSRP) / T1 MAC EACH-512K CIR EACH
XXX PREMISE
CUSTOMER DEDICATED ROUTER
HSRP
CUSTOMER DEDICATED ROUTER
BACKEND ACCESS (SECURE NETWORK SWITCHES)
CISCO 650x
CHECKPOINT FIREWALL
CISCO 650x
CHECKPOINT FIREWALL
DB SUN E450 CLUSTER
E(D)
E(B)
E(B)
Appl Rs6k 6 F 1
Appl Rs6k 6 F 1
DATA LAYER
FIREWALLED INTERNET, WEB RESOURCE, WEB ADMIN., DATA RESOURCE AND DATA ADMIN. ACCESS (SERVER ACCESS SWITCHES)
USF CORE 3.0
CISCO 650x
CISCO 650x
DEDICATED NOKIA IP 650
CISCO 650x
CISCO 650x
DEDICATED NOKIA IP 650
DISPATCHER SERVER (PRIMARY)
WEB NF x250 QTY(2)
WEB NF x250 QTY(2)
DISPATCHER SERVER (SECONDARY)
WEB LAYER
CISCO 650x
DEDICATED NOKIA IP 440
CISCO 650x
DEDICATED NOKIA IP 440
ROUTER AND/OR BANDWIDTH MANAGER
HSRP
ROUTER AND/OR BANDWIDTH MANAGER
INTERNET
INTERNET ACCESS (INTERNET ACCESS SWITCHES)

Dispatcher Server (Qty 2)
key file == NET6MDS0.003

Hardware
*IBM RS/6000 43P Model 150
*1 x 375MHz 604e PowerPC Processor
*512 MByte main memory [2 x 256 MB DIMM]
*2 x 9 GByte Hard Disk
.....[Base Operating System & BOS Mirror]
*1 x Media Bay Disk Drive Mounting Kit
*3 x 10/100 Mbps Ethernet NIC Adapters
*1 x Power Supply Connection

Software
*AIX Base Operating System (BOS) [current build]
*WebSphere Edge Server Software Package
....containing SecureWay Network Dispatcher Program

Network
A Adapter: (100BaseT) External INTERNET (100)
B Adapter: (10BaseT) WEB to DB Layer + USF Admin (300)
.....(Private Firewalled Internet Access)
C Adapter: (100BaseT) Private VLAN (200)

Web Layer Firewall Server (Qty 2)
key file == FWLN44S0.001

Hardware
*Nokia IP440 Base System
*1 x Intel Processor
*1 x 256 MByte RAM main memory
*1 x 20 GByte CPCI Hard Drive
*3 x Four Port 10/100 Ethernet CPCI Interface Card
*1 x Ethernet Cable (for crossover)
*1 x Power Supply
*1 x Power Supply Connection

Software
*IPSO software (operating system & Checkpoint)
*Check Point Firewall-1 Enterprise Security Suite
... *access Control
... *Authentication
... *Encryption
... *Address Translation
... *Content Security
... *Connection Control
... *Enterprise Management

Network Connections
A Adapter: External INTERNET (100)
I Adapter: Firewall to INTERNET Connection (20)
J Adapter: Firewall Logging (19)
K Adapter: Heartbeat ()
Q Adapter: Firewall Tool Resource (18)

TO FIG. 8B

FIG. 8A

FIG. 8B

FROM FIG. 8A

R Adapter: Firewall Internal VLAN (200)

Virtual Routing Redundancy Protocol is used forfailover

Data Layer Firewall Server (Qty 2)
key file == FWLN65S0.001

Hardware
*Nokia IP650 Base System
*1 x Intel Processor
*1 x 256 MByte RAM main memory
*1 x 6 GByte CPCI Hard Drive
*2 x Four Port 10/100 Ethernet CPCI Interface Card
*1 x Ethernet Cable (for crossover)
*2 x Power Supply
*2 x Power Supply Connection

Software
*IPSO software (operating system & Checkpoint)
*Check Point Firewall-1 Enterprise Security Suite
... *access Control
... *Authentication
... *Encryption
... *Address Translation
... *Content Security
... *Connection Control
... *Enterprise Management

Network Connections
J Adapter: Firewall Logging (19)
K Adapter: Heartbeat ()
L Adapter: Firewall to Web B (300)
M Adapter: Firewall to Data B (500)
Q Adapter: Firewall Tool Resource (18)

Virtual Routing Redundancy Protocol is used forfailover

TO FIG. 8C

FIG. 8C

FROM FIG. 8B

Data Base Server MED CLUSTER (Qty 1)
shown as == DB Sun E450 CLUSTER
key file == ADBSCMS0.001

Hardware
*Sun E450 Server [Qty 2 of these servers]
*4 x 400 Mhz cpu
*3072 MByte main memory
*2 x 18 GByte Hard Disk
.....[Base Operating System & BOS mirror]
*2 x 36 GByte Hard Disk [Cluster Software Usage]
.....[ADSM Backup System & mirror]
*1 x 12/24 GByte 4mm DDS-3 Internal Tape Drive
*4 x 10/100 Mbps Ethernet NIC's using 2 Quad Cards
*2 x Power Supply Connection for E450

Disk Expansion Unit w/RAID [Qty 2 of these units]
*4 x 18 GByte Hard Disk [per unit]
*2 x Power Supply Connection for Disk Exp Unit
*Total Hard Disk Storage for client data = 8 x 18 GB
.....[4 x 18 GByte available with mirroring]
***Administrative Workstation= Sun Ultra 5 w/monitor
...with Terminal Concentrator Kit for sharing
*1 x Power Supply Connection

Software
*Sun Solaris Operating System (BOS) [current build]
*Sun Cluster Software & Documentation
*Sun Veritas File System Software
*Sun Veritas Volume Manager Software
to be specified
*Other software is customer supplied software

Network Connections
B (100BaseT) WEB to DB Layer + USF Admin (300)
D (100BaseT) External BACKEND (400)
E(B) (100BaseT) Failover for Adapter (B) (300)
E(D) (100BaseT) Failover for Adapter (D) (400)

TO FIG. 8D

FIG. 8D FROM FIG. 8C

Application Server (Qty 2)
shown as == Appl RS6k 6 F 1
key file == ADB6MDS0.301

Hardware
*RS6000 6F1 MED APP or MED DB
*2 x 450 Mhz cpu
*4096 MByte main memory
*1 x PCI Dual Channel Ultra2 SCSI Adapter
*2 x 9 GByte Hard Disk
.....[Base Operating System & BOS mirror]
*1 x 4-Channel Ultra3 SCSI PCI RAID Adapter
*6 x 18 GByte Hard Disk [client data]
.....[3 x 18 GByte available with mirroring]
*4 x 10/100 Mbps Ethernet NIC's
*2 x Power Supply Connection

Software
*AIX Base Operating System (BOS) [current build]
Advanced Ed.of WebSphere Appl.Server
*Other software is customer supplied software

Network Connections
B (100BaseT) WEB to DB Layer + USF Admin (300)
D (100BaseT) External BACKEND (400)

Administration Workstation
Hardware
- Sun Ultra Enterprise Ultra 10 Model 440
- 1 x 440MHz UltraSPARC-III
- 256MB DRAM
- 2x9.1GB 7200 RPM Hard Disk (EIDE)
- 1 x 17in Monitor

Software
- Solaris 2.6

Network
- A Adapter (integrated): USF Admin (Data Admin (500))

Other Hardware
- 1 x Terminal Concentrator Kit

Fail Over Scheme:
- Server 1 fails over to server #2

EXP200 Notes:

You may need to include the following parts in your EXP200 configuration:
- 03K9311 IBM Netfinity 4.2M Ultra2 SCSI Cable
- 37L5857 Netfinity EXP200 Rack-to-Tower Conversion Kit
- 37L0075 Netfinity EXP200 350W Redundant Power Supply